



Classification: Electric Generation System Specialist I	Position No. 5800-4841-001
CBID: R09	Office: Energy Efficiency Research Office
Date Prepared: December 2012	Division: Energy Research & Development (ERDD)
KEY: (E) IS ESSENTIAL, (M) IS MARGINAL	

Under the general supervision of the Energy Commission Supervisor II in the Energy Efficiency Research Office, the incumbent serves as part of an interdisciplinary and/or interdivisional team to plan and implement public interest energy research, development and demonstration (RD&D) efforts related to advancing renewable energy and distributed generation technologies to advance zero net energy (ZNE) buildings. The goal is to conduct RD&D to advance science and technologies not adequately provided by the regulated or competitive markets. The incumbent performs time-critical and subject matter-critical technical or market analyses to support public interest energy RD&D funding; manages highly complex RD&D projects; and consults with experts in the field.

The incumbent will address the research issues affecting the design, operation, deployment and integration of new and emerging renewable generation technologies, generation alternatives, and other enabling technologies to be designed and developed to help meet the State's Renewable Portfolio Standards and ZNE building goals; identify methods, models and techniques to evaluate energy system impacts of renewable energy and distributed generation; assess the impact of building, community-scale and utility-scale renewable energy technologies on the cost of generation; evaluate and field test new computer models to determine the ideal characteristics, design, operation and locations for desirable new renewable technologies; reduce greenhouse gases by increasing the penetration of high-efficiency combined heat and power (CHP) renewable energy systems in conjunction with ZNE building deployment; and develop and publish scenarios detailing optimal configuration of new renewable energy generation systems.

WORKING CONDITIONS. Work is performed primarily in an office, conference room, and hearing room environment and may require standing and walking as well as sitting for long periods of time. The work area is well-lit and ventilation is adequate. The noise level may be often high. Some travel is required to attend off-site meetings. Additional hours beyond an eight-hour workday or forty-hour workweek may be required. While performing the duties described below, the incumbent will be required to work alone and/or in a team environment; utilize a personal computer and appropriate Commission software such as word processing, electronic mail, Internet and analytical models; and participate in meetings with other Energy Commission staff and other agencies.

DUTIES AND RESPONSIBILITIES:

- 40% Lead the research, design and development of new renewable electricity generation and distributed generation technologies for ZNE buildings and communities, including:
- Ensure compatibility with electricity systems in terms of operation, characteristics, and benefits.
 - Formulate and develop a roadmap to identify future RD&D needs and their potential to help achieve California's ZNE building goals based on the results of past research and public workshops on the subject.
 - Prepare research initiatives and budgets for consideration by division and office management.
 - Work with local, regional, state, and federal government entities, utilities, and other stakeholders to facilitate the coordination of public interest energy research. (E)



- 20% Complete complex technical analyses, evaluations, and field demonstrations of new and emerging renewable electricity generation, distributed generation, and other energy technologies as it relates to ZNE buildings and communities, including:
- Develop and use complex system models that will evaluate and assess the performance, reliability, capability and energy savings resulting from integrated advanced energy technologies.
 - Evaluate the feasibility of integrating new technologies with current and future building and community-scale renewable electricity generation to meet ZNE building goals.
 - Use and interpret computer models to evaluate the potential impacts of new advanced energy technologies on state-mandated energy goals and policies, such as higher levels of electricity generation from renewable resources, and achievement of ZNE buildings. (E)
- 15% Manage complex research projects involving renewable electricity generation and distributed generation technologies for ZNE buildings and communities. The incumbent will be responsible for all phases of project management including:
- Review proposals to determine how well the proposed project addresses the scope of the solicitation criteria including, but not limited to: the extent to which the project will advance science or technology, address market issues and needs, and meet specified target goals and objectives; the skill and experience of the project team to carry out the technical tasks within budget and schedule, and move the results into the marketplace; and the adequacy of the project funding
 - Prepare work statements, budgets, schedules and agreement amendments
 - Maintain technical and business relationships with the Contractors and/or Grantees
 - Review monthly progress reports and prepare an evaluation of the project; brief management, as required
 - Inspect projects to ensure they meet technical, fiscal, and administrative objectives
 - Review and approve Contractor and/or Grantee invoices. (E)
- 10% Prepare, review and edit reports, multiple-technology resource plans, contracts and other documents. Establish and maintain project priorities, perform project evaluations, develop work plans and budgets necessary to meet program and project goals. (E)
- 10% Consult, advise, and make presentations to Office and Division management, Executive Office, and Commissioners on a variety of research needs related to renewable energy generation technologies and their application on the electricity generation systems and ZNE buildings and communities. Participate in identification of issues and analytic methodologies. (E)
- 5% Perform other duties, as required, consistent with the specifications of this classification. (M)

SIGNATURES			
I Certify That I Am Able To Perform, With Or Without The Assistance Of A Reasonable Accommodation, The Essential Job Duties Of This Position			
INCUMBENT		KIRK SWITZER	
Date		Date	
Electric Generation System Specialist I (EGSS I)		Energy Commission Supervisor II (EFF)	